

computing device of information after generation by speaking and digitizing has been done on another computing device, and 2) voice recognition and error correction software. More particularly, the claims, as amended, clearly recite important differences between Minematsu and the present invention.

At the outset, applicant's attorney would like to thank Examiner Azad and Supervisory Primary Examiner Smith for the time extended during the interview kindly granted on October 8, 2002, in a companion case. In this amendment, applicant has been mindful of the issues raised during that interview and it is believed that the present application addresses the same and is in condition for allowance. During that interview, most importantly, it was noted by the Office that the issue of patentability turned on the obviousness of several aspects of the present invention, namely 1) the generation and use of a database of proper pronunciation and a database of mispronunciations in a single system, 2) abandonment of the pronunciation based International Phonetic Alphabet in favor of Lessac's feeling-based ("inner harmonic sensing") modeling, 3) abandonment of exclusively word by word or syllable by syllable recognition techniques in favor of selective use of adjoining word pronunciation modification recognition, and 4) giving the user the option of receiving speech training, which is enhanced by the feature of 5) having a sensitivity error threshold algorithm which responds to speech patterns, for example, repeated mispronunciations (or a reliable single instance of mispronunciation) and, accordingly, determines that training is likely to be appropriate.

Various aspects of the above patentable aspects of the invention are claimed in the claims. For example, claims 1, 19, 21, 22 and 23 claim various aspects of multiple databases of properly pronounced and improperly pronounced words. Claims 14, 25, and 26 claim an algorithm for determining when training is appropriately offered. Claims 3, 17 and 20 recite a provision of an option for training. Claim 9 recites providing an interactive program instructing the user using Lessac system techniques.

It is respectfully submitted that the use of two separate databases is not shown or suggested by the prior art. While, at first blush, Minematsu seems to come tantalizingly close, in fact all that he has in common with the invention is the recognition that people mispronounce words. Minematsu's answer is to have a separate program "adjusted to the native language" (column 4. line 58) of the speaker. This compares with the present

invention where the program has two databases, one adjusted to proper English and the other adjusted to include a wide range of mispronunciations. Nothing in the prior art shows even two databases. Including two databases in one product, accordingly, is not taught by the prior art. Rather, Minematsu teaches away from this, talking about adjusting the product to "one" dialect or "the native language" of the user. Moreover, even assuming that a two database product were to be in the prior art, there is nothing to suggest that two databases could be combined. This is the case, not respecting the long-standing need for accurate voice to text and speech training technology. Indeed, voice recognition technology dates back over two decades.

Likewise, it is clear that the employment of Lessac techniques is not shown or suggested by the prior art, which makes absolutely no mention of Lessac. As is shown by the attached materials from the book of Mr. Lessac, one of the inventors herein, the Lessac system is based on feelings, rather than being based on a syllable framework such as the International Phonetic Alphabet. There is a prejudice in the art against the Lessac system, as can be seen by the fact that of the numerous voice recognition patents presented in the search submitted in the prior amendment, not a single one referenced the Lessac system, while numerous patents referenced the International Phonetic Alphabet. This is all the more impressive when one considers that the Lessac system has been around in one form or another for many years and that it was first published largely in its present form in 1960.

In addition, the use of multiple word based training represents a substantial departure from existing systems. In particular, Lessac addresses multiple word aspects of the Lessac system at pages 112-118 in the annexed material from Lessac's book.

Unlike Minematsu and Bjil, the present system also has the feature of giving a user the option to receive training.

This aspect of the invention is claimed in claims 3, 5, 11, 17 and 20. In addition, claims 14, 25 and 26 claim in various ways an algorithm for determining when errors are occurring. Such an approach is not remotely taught by any of the prior art. The use of this algorithm is of particular value in the training aspect of the present invention, insofar as it disqualifies random mispronunciations, or perhaps even mild system failures from triggering the training menu. This aspect of the invention is not shown by the prior art.

As is apparent, such a feature renders substantial value to the inventive system. Computer errors are well-known and occur often in computerized systems. Notwithstanding the same, prior art systems, have not used such an algorithm to avoid such problems. Such an algorithm based on multiple databases, that is one based in a system with known mispronunciation databases, is not remotely even suggested by the prior art. Accordingly, claim 1 and the other independent claims which specify a two database system are not remotely taught by the prior art.

As noted above, several of the claims, such as claims 9, recite the presentation of an interactive program to instruct the user using Lessac system techniques. The Office has questioned whether the techniques are adequately disclosed. The application clearly recites a reference to "the Lessac method described in The Use and Training of the Human Voice -A Bio-Dynamic Approach to Vocal Life, Arthur Lessac, Mayfield Publishing Co. (1997)." Excerpts from the same or attached hereto.

In addition the specification refers to the technique in accordance with which "the user is encouraged to use his 'inner harmonic sensing.'" As described in specification, this enhances the description of a particular sound by having the user explore how the sound affects the user's feelings or encourages the user to some action.

The specification gives as an illustrative example the Lessac method teachings for the sound of the letter "N". A complete description of the sounds of the English language and the Lessac method teachings relating to the same are contained in the book as is illustrated by the attached excerpts from the book written by Mr. Lessac.

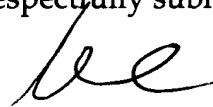
During the above interview, the question was raised as to whether the two databases, one of pronunciations and one of mispronunciations, are properly included in the substance of the claim. It is believed that they are because they are directly referenced, for example, in paragraph (c) and paragraph (g), respectively of claim 1. In addition, the Office relies on the Bijl reference, which was identified as a teaching reference dealing with the generation of databases and inclusion of the same in the system. See also claim 27 which positively recites the generation of the two databases, in addition to their uses.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation

with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

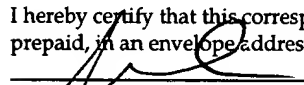
Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on April 15, 2002 ~~October 16, 2002~~


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**"VERSION OF AMENDED CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE"**

18. (Amended) A method of speech recognition as in claim [14] 17, said interactive program instructing the user in the correct pronunciation of said sound in terms of the sound of a musical instrument.